

### **REMARKS**

Claims 24 and 71 are amended. Claims 62-70 and 74-78 are cancelled. Claims 24, 45, 52-61 and 71-73 are pending in the application.

Applicant notes the Examiner's indicated allowability of claims 45 and 55-61 and the Examiner's indicated allowability of the subject matter of claims 53-54 and 71-73.

Claims 24 and 52 stand rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative under 35 U.S.C. § 103(a) as being obvious over Cabral, U.S. Patent No. 5,838,131. The Examiner is further reminded by direction to MPEP § 2131 that anticipation requires each and every element of a claim to be disclosed in a single prior art reference. The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 24 and 52 are allowable over Cabral for at least the reason that Cabral fails to disclose or suggest each and every limitation in either of those claims.

As amended, independent claim 24 recites forming a titanium metal layer over a silicon containing substrate and subsequently providing compressive stress inducing atoms into the titanium metal layer. The amendment to claim 24 is supported by the specification at, for example, page 10, line 22 through page 11, line 7; and page 13, lines 18-21. Cabral discloses forming a titanium alloy layer by simultaneous deposition of titanium and refractory metal (col. 10, ll. 6-52). Cabral does not disclose or suggest the claim 24 recited providing compressive stress inducing atoms into a titanium metal layer after forming the

titanium metal layer. Accordingly, independent claim 24 is not anticipated by or rendered obvious by Cabral and is allowable over this reference.

Dependent claim 52 is allowable over Cabral for at least the reason that it depends from allowable base claim 24. Dependent claims 53 and 54 are allowable for at least the reason that they depend from allowable base claim 24 and recite allowable subject matter as indicated by the Examiner.

Claims 62-70 stand rejected under 35 U.S.C. § 102(e) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being obvious over Apte, U.S. Patent No. 5,593,924, or in the case of claim 67 as being obvious over Apte as combined with Kawamura, JP-8139056. Without admission as to the propriety of the Examiner's rejections claims 62-70 are cancelled.

Claims 71-73 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner states that the recited "refractory metal comprising a first crystalline phase" at lines 8-9 of claim 71 should be change to "refractory metal silicide comprising the first crystalline phase". Without admission as to the propriety of the Examiner's rejection, independent claim 71 is amended to incorporate the suggested recitation. Accordingly, applicant respectfully requests withdrawal of the § 112 rejection of claim 71 and dependent claims 72-73. As indicated by the Examiner at page 8 of the present action, amendment of claim 71 to overcome the § 112 rejection will place claims 71-73 in condition for allowance.

Claims 74-78 stand rejected under 35 U.S.C. § 112, first paragraph and second paragraph, and under 35 U.S.C. §§ 102 and 103 as being unpatentable over Apte.

Without admission as to the propriety of any of the Examiner's rejections, claims 74-78 are cancelled.

For the reasons discussed above, pending claims 24, 45, 52-61 and 71-73 are allowable and the application is in condition for immediate allowance. Accordingly, applicant respectfully requests formal allowance of pending claims 24, 45, 52-61 and 71-73 in the Examiner's next action.

Respectfully submitted,

Dated: June 2, 2003

By: Jennifer J. Taylor  
Jennifer J. Taylor, Ph.D.  
Reg. No. 48,711